

# *Mercer County MPO* **Bicycle/Pedestrian Action Plan**

## **Issue Identification & Order of Magnitude Costs**



*Sept. 2001*

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## Introduction

In 1999, the Mercer County MPO partnered with the Lawrence County Planning Commission to develop a draft bicycle/pedestrian plan guide to assist in decision-making efforts for the region. Although never officially adopted, the draft provides recommendations through the assistance of a diverse steering committee representing bicycle and pedestrian stakeholders from both counties. One of the plan's top priority goals is the identification of a bicycle and pedestrian network. More specifically, the plan notes that the two counties "will identify the top 3 routes in the bicycle/pedestrian network to pursue" and will "pursue the funding of an action plan" for those three corridors.

The Mercer County Regional Planning Commission hired Gannett Fleming Inc. to assist in evaluating three priority corridors and develop order of magnitude cost estimates. An Action Plan, which identifies three routes in the greater Shenango Valley for development as part of an overall bicycle/pedestrian network was subsequently developed. The three corridors described in this Action Plan are not discussed in any priority order, but should give area municipal officials and decision makers a framework for future decision making, as well as a regionally developed and coordinated plan to use in seeking funding for construction.

### Vision Statement

"Organizations in the...Mercer County region value the importance of walking and bicycling for transportation, recreation, health and wellness, and will actively plan and provide for the safe integration of walking and bicycling into transportation, recreation and tourism." – *from the Mercer County Bicycle/Pedestrian Transportation Plan, 1999*

The three priority corridors examined include:

- Highland Road (the East-West Corridor) from PA 18 to PA 718
- A north-south corridor, utilizing several roads through the Valley from Wheatland Borough to Sharpsville Borough
- A rail trail from West Middlesex Borough north to the Shenango Valley Dam and Reservoir

The adoption of this Action Plan will serve as an amendment to the Shenango Valley's Long Range Transportation Plan, which is anticipated to be updated and adopted by June 2002.

## The Highland Road/East-West Corridor

### Purpose

The east-west bicycle/pedestrian corridor will serve three main purposes:

- § To provide alternative modes of transportation from the residential areas of Sharon to the commercial and institutional areas of Hermitage, specifically to the City's schools, government offices, and medical offices.
- § To provide a recreational route through residential areas of Sharon.
- § To provide connections to other proposed bicycle/pedestrian corridors along the Shenango River, to Buhl Park, to the U.S. Army Corps of Engineers' Dam Overlook, to Sharpsville, to Farrell, and to Wheatland.

### Description

The east-west corridor is roadway-based and extends from the Shenango River near the West Hills of Sharon east to Hickory High School (see *map*). The heart of the proposed route runs along Highland Road traversing residential areas through Sharon to commercial and institutional areas in the City of Hermitage. The route will provide connections to:

- § City of Hermitage government offices
- § Hickory High School
- § Bicycle/pedestrian facility along PA 18
- § Hermitage middle and elementary schools
- § Pine Hollow Run
- § Numerous medical and doctor facilities
- § Residential neighborhoods in Sharon
- § PA 518
- § Penn State Shenango Campus
- § Industrial facilities near the Shenango River
- § Shenango River



**Figure 1. New sidewalk in front of Hickory High School will provide a connection to a future shared use facility to be built as part of the PA 18 widening project.**



**Figure 2. Hermitage Elementary School.**

It will provide this connection via:

- \$ Clark Street near the Shenango River west to
- \$ Sharpsville Avenue (PA 518) to
- \$ Hull Street to
- \$ Jefferson Avenue to
- \$ Highland Road terminating at PA 18



**Figure 3. Clark Street (eastward view).**



**Figure 4. Sharpsville Avenue (southward view).**



**Figure 5. Highland Road between Jefferson Avenue and the Municipal Boundary (eastward view).**



**Figure 6. Highland Road between N. Buhl Farm Drive and the Municipal Boundary (westward view).**

## Existing Conditions

The table below summarizes the existing conditions along the proposed corridor:

SEGMENT NAME	LIGHTING	ROADWAY CONDITION	ROADWAY WIDTH	ROADWAY TYPE <sup>1</sup>	SPEED LIMIT (MPH)	EXISTING PED FACILITIES	EXISTING BIKE FACILITIES	PAVEMENT MARKINGS	LAND USE
<b>Clark Street</b> (From PA 718 to Sharpville Avenue)	Yes	Poor	26' total width	➤Curb on south side ➤8' shldr. on north side	Not Posted	➤Sidewalk on south side ➤Poor condition	None	None	Open Space/ Industrial
<b>Sharpville Avenue</b> (From Clark Street to Hull Street)	Yes	Good	48' total width	Curb	25	➤Sidewalk on both sides ➤Fair condition	None (Bicyclists noted using sidewalks)	➤Centerline ➤Turn lanes	Industrial/ Commercial
<b>Hull Street</b> (From Sharpville Avenue to Jefferson Avenue)	Yes	➤Fair ➤Steep grade	20' total width	➤Curb ➤No parking	25	➤Sidewalk on both sides ➤Poor condition	None	None	Residential
<b>Jefferson Avenue</b> (From Hull Street to Highland Road)	Yes	-	-	-	-	-	-	-	-
<b>Highland Road</b> (From Jefferson Avenue to Forker Blvd.)	Yes	Good	34' total width	➤Curb ➤No parking	25	➤Sidewalk on south side ➤Good condition ➤Narrow	None	None	Residential/ Recreational

SEGMENT NAME	LIGHTING	ROADWAY CONDITION	ROADWAY WIDTH	ROADWAY TYPE <sup>1</sup>	SPEED LIMIT (MPH)	EXISTING PED FACILITIES	EXISTING BIKE FACILITIES	PAVEMENT MARKINGS	LAND USE
<b>Highland Road</b>  (From Forker Blvd. to Hermitage/ Sharon Boundary)	Yes	Good	33.5' total width	Partly opened/partly curbed	25	Sidewalk on one side	None	Centerline	Residential
<b>Highland Road</b>  (From Hermitage/ Sharon Boundary to N. Buhl Farm Drive)	Yes	Good	➤ 12' lanes ➤ 3-4' shoulders	Open	35	None	None	➤ Centerline ➤ Edgelines	Residential
<b>Highland Road<sup>2</sup></b>  (From N. Buhl Farm Drive to PA 18)	No	-	➤ 11' lanes ➤ 2' paved shoulders ➤ 8' gravel shoulders	-	-	-	-	-	-

Notes:

1. All roadways are two-lane, two-way.
2. This section of Highland Road is programmed for improvements.

## Programmed Improvements

Improvements are currently under design for Highland Avenue from PA 18 to North Buhl Farm Road (approximately 6000 feet). It is anticipated that Highland Road will be widened to two, 12-foot wide travel lanes with an 11-foot wide center left-turn lane and 8-foot wide shoulders on both sides. The intersections of Highland Road with Clarksville Road and North Buhl Farm Road will be reconfigured as part of the project, making Highland Road the major street through both intersections. This project is still in the Preliminary Engineering phase but should quickly move into Final Design after environmental clearance is received.

At a minimum, the study team recommends that the project include:

- § 5-foot wide bicycle lanes or adequate shoulder width (5 feet) for bicycles
- § 5-foot wide sidewalks on both sides of the roadway
- § Street lighting

Figure 8 shows a preferred typical section for this segment of roadway. If street lighting is not provided, this may be the only roadway segment in the east-west corridor without it. PENNDOT's plans include acquisition of adequate right-of-way width for the City of Hermitage to construct sidewalks in the future. No construction funds have yet been programmed for the overall improvement of Highland Road. This will need to be addressed when the MPO develops its 2003 TIP in the fall of 2002.

## Challenges

Some of the challenges to reach the objective of a connected east-west bicycle/pedestrian corridor are:

- § Defining a western terminal/trailhead
- § Constructing sidewalks along Highland Avenue in the City of Hermitage
- § Providing pedestrian accommodations at most intersections and at key mid-block crossings
- § Improving sidewalk conditions along some sections of the corridor
- § Parking conditions along Highland Avenue from the municipal boundary to Forker Road
- § Narrow street width along Hull Street



**Figure 7. Poor sidewalk conditions and narrow street width along Hull Street (eastward view).**

Figure 8. Highland Road Cross Section.

## Recommendations/Action Plan & Associated Costs

We recommend the following actions in order to improve the accommodation of pedestrians and bicyclists in this corridor:

### Action #1. Perform a feasibility study to construct a west end terminal.

Currently, at the west end of the proposed route, there are no means to change modes of transportation (i.e., from a motorized vehicle to biking and vice versa). Because of an open field in the southeast corner of the intersection of Clark Street and PA 718, an opportunity exists to construct a west end terminal for the proposed route.

Some issues to consider in the feasibility study are:

- \$ Ownership of the property
- \$ Zoning
- \$ Environmental
- \$ Access

The cost to perform this type of study is approximately \$1,500.

### Action #2. Approach the Hermitage School District about utilizing existing parking at their schools as an east end terminal.

The Hermitage High School parking area, as well as the Middle and Elementary schools, could provide an east end terminal for the proposed bicycle route. The Hermitage School District should be contacted to establish an agreement to utilize these areas, especially during evening hours and the summer when school is not in session.

The cost to establish an agreement depends upon the School District's willingness to participate.



**Figure 9. Possible site for trail head along Clark Street at the intersection of PA 718 (southwestward view).**

### **Action #3. Construct a sidewalk along Highland Road from the municipal boundary to North Buhl Farm Road.**

Currently, sidewalks exist in the City of Sharon and are proposed in the City of Hermitage from PA 18 to North Buhl Farm Road as part of PENNDOT's project. This would leave a short segment of the East-West corridor in the City of Hermitage without a sidewalk. We recommend the construction of this segment of sidewalk from the municipal boundary east to North Buhl Farm Road.

With its construction on both sides of the roadway, this is approximately 2,200 feet of 5-foot wide sidewalk. The estimated construction cost of this improvement is \$85,000. This cost does not include grading, acquisition of right-of-way, or utility relocation.



**Figure 10. No sidewalks along Highland Road between the Municipal Boundary and North Buhl Farm Road (northwestward view).**

### **Action #4. Encourage and assist the City of Sharon in developing a corridor sidewalk maintenance and improvement program.**

The ultimate goal of a corridor sidewalk maintenance and improvement program is to have 5-foot wide sidewalks on both sides of the corridor that are in good condition. To accomplish this goal, the following improvements must be made:

- § Improve the condition of existing sidewalks along Clark Street and Hull Street. The estimated construction cost for this improvement is \$325,000.
- § Widen narrow sidewalks such as the segment along Highland Road between Jefferson Avenue and Forker Boulevard. The estimated construction cost for this improvement is \$85,000.
- § Construct a sidewalk on the side where it is absent along Highland Road. The estimated construction cost for this improvement is \$210,000.

These costs do not include grading, acquisition of right-of-way, or utility relocation.

### Action #5. Inventory and improve pedestrian accommodations at intersections.

The study team did not inventory pedestrian accommodations at all intersections within the study corridor. However, conditions that should be improved include:

- § Removal of “NO PEDESTRIAN CROSSING” signs. The estimated unit cost to remove the signs is \$200.
- § Installation of curb cuts. The estimated unit construction cost is \$2,500.
- § Installation of pedestrian push buttons and signal heads at signalized intersections. The estimated construction cost per intersection for push buttons and wiring is \$2,100, and the estimated construction cost per intersection for pedestrian signal heads and wiring is \$5,700.

A study to inventory existing conditions and recommend improvements is the first step to accomplishing this action item. The estimated cost of this study is \$15,000.



**Figure 11. “NO PEDESTRIAN CROSSING SIGNS” should be removed where possible.**

### Action #6. Designate the corridor a bicycle route by implementing the proper signing and pavement markings.

Figures 12 through 14 depict proper cross sections, signing, and pavement markings for a bicycle route according to PENNDOT and FHWA guidelines. With the development of a bicycle/pedestrian network, the MPO should consider the adoption and implementation of signing standards (or bicycle route markers) to identify the bicycle routes. Federal Transportation Enhancement dollars are available for the construction and placement of these signs.

The placement of bike route signs on shared-roadway facilities should be in accordance with PENNDOT standards and specifications, including Strike-Off Letter 470-99-47 (refer to Appendix A):

- § Every turn on the designated route is to have an advance turn assembly (sign M1-8A), a turn assembly (sign M1-8A), and a confirmation (sign M1-8) in each direction (refer to Figure 14).
- § Confirmation markers should be placed at distances of approximately 3-5 miles along the route.
- § Confirmation markers should be placed immediately beyond major intersections.

Figure 12.

Figure 13.

Figure 14.

Standard pavement markings should be used to inform bicyclists and motorists of the presence of bike lanes. Figure 14 shows standard pavement markings for bike lanes, consisting of a bike symbol, a directional arrow, and the optional word "LANE".

By restricting parking (with the exception of Hull Street) the roadways in this corridor have or at least almost have the proper width to accommodate a bicycle lane. The cost and impacts of widening and restricting parking along Hull Street to obtain the proper width appear to be prohibitive. Further investigation is required. Although no data was collected, it would appear that the low traffic volumes observed on Hull Street would not necessitate a dedicated bicycle lane being constructed.

Besides Hull Street, the approximate construction cost to implement these improvements is \$110,000.

### **Action #7. Improve roadway condition of Clark Street.**

Portions of Clark Street are in poor condition. While it may not be necessary to reconstruct Clark Street, repairs such as crack sealing and patching should be performed. Some sections may need resurfaced in order to obtain proper drainage.



**Figure 15. Poor pavement conditions along Clark Street (westward view).**

**Figure 16.**

## The Sharpsville/Wheatland North-South Corridor

### Purpose

The north-south bicycle/pedestrian corridor will serve three main purposes:

- § To provide an alternative mode of transportation for traveling north-south through the Shenango Valley.
- § To provide a connection to various residential communities, recreational areas (Buhl Park), and educational institutions (i.e. Farrell, Sharon, and Sharpsville Area High Schools).
- § To provide connections to other proposed bicycle/pedestrian corridors along the Shenango River to the south and running east-west from Hermitage High School to downtown Sharon.

### Description

The North-South corridor is a roadway-based corridor extending through the Shenango River Valley from Wheatland near the Shenango River north to the U.S. Army Corps of Engineers' Dam Overlook (*see map*). The proposed route follows several roads that travel through the residential areas of Farrell, Sharon, and Sharpsville. The route will provide connection to:

- § PA 718
- § Industrial facilities near the Shenango River in Wheatland
- § Residential neighborhoods in Farrell, Sharon, and Sharpsville
- § Farrell, Sharon, and Sharpsville High Schools
- § Our Lady of Fatima School
- § U.S. 62
- § Buhl Park
- § Sharpsville Middle and Elementary Schools
- § PA 518
- § U.S. Army Corps of Engineers' Dam Overlook



**Figure 17. Sharpsville Area School District Seventh Street Elementary School.**



**Figure 18. Sharpsville Area High School.**

The primary route will provide this connection via:

- \$ Mercer Avenue north to
- \$ Shenango Avenue to
- \$ Park Avenue to
- \$ Crowder Street to
- \$ George Street to
- \$ Spencer and Service Avenues to
- \$ Forker Boulevard to
- \$ Hazen Road to
- \$ 7<sup>th</sup> Street to
- \$ PA 518 (Main Street) to
- \$ Walnut Street to
- \$ High Street to
- \$ The Shenango River.



Figure 19. Intersection of Mercer Avenue with Shenango Avenue (northward view).



Figure 20. Shenango Avenue (northward view).



Figure 21. Park Avenue (southward view).

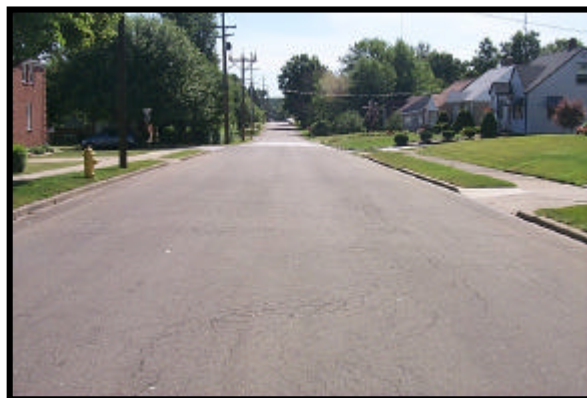


Figure 22. George Street (eastward view).



Figure 23. Forker Boulevard.



Figure 24. Hazen Road.



Figure 25. 7<sup>th</sup> Street.



Figure 26. PA 518 (Main Street)  
Sharpsville.



Figure 27. Walnut Street.



Figure 28. High Street.



Figure 29. U.S. Army Corps of Engineers'  
Dam Overlook.

An optional route from Mercer Avenue to Park Avenue includes:

- § Indiana Avenue north to
- § Union Street



**Figure 30. Indiana Avenue (northward view).**



**Figure 31. Union Street and Park Avenue.**

A branch route to Farrell High School from Park Avenue or Indiana Avenue includes the use of Roemer Street. A branch route to the Sharpsville schools from 7<sup>th</sup> Street includes:

- Koehler Drive to
- 4<sup>th</sup> Street to
- Quarry Way



**Figure 32. Koehler Drive (westward view).**



**Figure 33. 4<sup>th</sup> Street (northward view).**

## Existing Conditions

The table below summarizes the existing conditions along the proposed corridor:

SEGMENT NAME	LIGHTING	ROADWAY CONDITION	ROADWAY WIDTH	ROADWAY TYPE <sup>1</sup>	SPEED LIMIT (MPH)	EXISTING PED FACILITIES	EXISTING BIKE FACILITIES	PAVEMENT MARKINGS	LAND USE
<b>High Street</b> (From Dam Overlook to Mercer Avenue)	Yes	Fair	26' total width	Open	25	None	None	None	Recreational/ Commercial
<b>High Street</b> (From Mercer Avenue to Walnut Street)	No	Good	36' total width	Open	Not Posted	None	None	None	Commercial/ Residential
<b>Walnut Street</b> (From High Street to PA 518)	Yes - minimal	Good	43' total width	Curb	Not Posted	None	None	Centerline	Commercial/ Residential
<b>PA 518 (Main Street)</b> (From Walnut Street to 7 <sup>th</sup> Street)	Yes	Good	33' total width	➤Curb ➤No parking on south side	25	Sidewalk on both sides	None	Centerline	Commercial/ Residential
<b>7<sup>th</sup> Street</b> (From PA 518 to Hazen Road)	Yes - minimal	Good	36' total width	Curb	35	➤Sidewalk on both sides ➤Fair Condition	None	Centerline	Residential

SEGMENT NAME	LIGHTING	ROADWAY CONDITION	ROADWAY WIDTH	ROADWAY TYPE <sup>1</sup>	SPEED LIMIT (MPH)	EXISTING PED FACILITIES	EXISTING BIKE FACILITIES	PAVEMENT MARKINGS	LAND USE
<b>Koehler Drive<sup>2</sup></b> (From 7 <sup>th</sup> Street to 4 <sup>th</sup> Street)	Yes	Fair	47' total width (including 7' grass median)	Curb	25	None	None	None	Residential
<b>4<sup>th</sup> Street<sup>2</sup></b> (From Koehler Drive to Quarry Way)	Yes	Fair	26' total width	Curb	Not Posted	Sidewalk on east side	None	None	Residential
<b>Quarry Way<sup>2</sup></b> (From 4 <sup>th</sup> Street to Sharpsville Area Schools)	Yes	Fair	26' total width	Curb	15	<ul style="list-style-type: none"> <li>➤ Gravel sidewalk on north side</li> <li>➤ Narrow</li> <li>➤ Poor condition</li> </ul>	None	None	-
<b>Hazen Road</b> (From 7 <sup>th</sup> Street to Forker Boulevard)	Yes - minimal	Good	24' total width	<ul style="list-style-type: none"> <li>➤ Open</li> <li>➤ No shoulder</li> </ul>	35	None	None	Centerline	Residential/Recreational
<b>Forker Boulevard</b> (from Hazen Road to Highland Road)	Yes	Excellent	<ul style="list-style-type: none"> <li>➤ 21' travelway</li> <li>➤ 4' shoulders</li> </ul>	Open	35	Sidewalk on east side	None	<ul style="list-style-type: none"> <li>➤ Centerline</li> <li>➤ Edgelines</li> </ul>	Residential/Recreational

SEGMENT NAME	LIGHTING	ROADWAY CONDITION	ROADWAY WIDTH	ROADWAY TYPE <sup>1</sup>	SPEED LIMIT (MPH)	EXISTING PED FACILITIES	EXISTING BIKE FACILITIES	PAVEMENT MARKINGS	LAND USE
<b>Forker Boulevard</b>  (from Highland Road to Spencer/Service Avenues)	Yes	Good	37' total width	<ul style="list-style-type: none"> <li>➤ Curb</li> <li>➤ No parking</li> </ul>	35	Sidewalk on west side	None	Centerline	Residential/ Institutional
<b>Spencer / Service Avenues</b>  (From Forker Boulevard to George Street)	Yes	Fair	30' total width	Curb	25 on Service Avenue	<ul style="list-style-type: none"> <li>➤ Sidewalk on west side of Spencer</li> <li>➤ Poor condition</li> <li>➤ No sidewalk on Service</li> </ul>	None	None	Residential
<b>George Street</b>  (From Spencer/Service Avenues to Crowder Street)	Yes	Fair	29' total width	Curb	Not Posted	<ul style="list-style-type: none"> <li>➤ Sidewalk on both sides</li> <li>➤ Fair condition</li> </ul>	None	None	Residential
<b>Crowder Street</b>  (From George Street to Park Avenue)	Yes	Fair	29.5' total width	Curb	Not Posted	<ul style="list-style-type: none"> <li>➤ Sidewalk on both sides</li> <li>➤ Fair condition</li> </ul>	None	None	Residential

SEGMENT NAME	LIGHTING	ROADWAY CONDITION	ROADWAY WIDTH	ROADWAY TYPE <sup>1</sup>	SPEED LIMIT (MPH)	EXISTING PED FACILITIES	EXISTING BIKE FACILITIES	PAVEMENT MARKINGS	LAND USE
<b>Park Avenue (Upper)</b>  (From Crowder Street to Park Avenue (Lower))	Yes	Fair	29' total width	Curb	Not Posted	<ul style="list-style-type: none"> <li>➤ Sidewalk on both sides</li> <li>➤ Fair condition</li> </ul>	None	None	Residential
<b>Park (Lower)</b>  (From Park Avenue (Upper) to Shenango Avenue)	No	Fair	23' paved width (does not include grass island)	<ul style="list-style-type: none"> <li>➤ Curb</li> <li>➤ No parking on east side</li> </ul>	Not Posted	<ul style="list-style-type: none"> <li>➤ Sidewalk on both sides</li> <li>➤ Fair condition</li> </ul>	None	None	Residential/ Recreational
<b>Union Street<sup>3</sup></b>  (From Park Avenue to Indiana Avenue)	Yes	Good	23' total width	Open	Not Posted	None	None	None	Residential
<b>Indiana Avenue<sup>3</sup></b>  (From Union Street to Mercer Avenue)	Yes	Good	29' total width	Curb	35	<ul style="list-style-type: none"> <li>➤ Sidewalk on both sides</li> <li>➤ Good condition</li> </ul>	None	None	Residential

SEGMENT NAME	LIGHTING	ROADWAY CONDITION	ROADWAY WIDTH	ROADWAY TYPE <sup>1</sup>	SPEED LIMIT (MPH)	EXISTING PED FACILITIES	EXISTING BIKE FACILITIES	PAVEMENT MARKINGS	LAND USE
<b>Roemer Street<sup>4</sup></b>  (From Indiana Avenue to Farrell High School)	Yes	Good	35' total width	Curb	Not Posted	<ul style="list-style-type: none"> <li>➤ Sidewalk on both sides</li> <li>➤ Fair condition</li> </ul>	None	Centerline	Residential/ Institutional
<b>Shenango Avenue</b>  (From Park Avenue to Mercer Avenue)	Yes – minimal	Fair	23' total width	<ul style="list-style-type: none"> <li>➤ Partially curbed</li> <li>➤ No parking on one side</li> </ul>	Not Posted	<ul style="list-style-type: none"> <li>➤ Sidewalk for a portion of roadway segment</li> <li>➤ Poor condition</li> </ul>	None	None	Residential
<b>Mercer Avenue</b>	Yes - partial	Fair	<ul style="list-style-type: none"> <li>➤ 20' travelway</li> <li>➤ 2-3' shoulders</li> </ul>	Open	35	None	None	<ul style="list-style-type: none"> <li>➤ Centerline</li> <li>➤ Edgelines</li> </ul>	Residential

Notes:

1. All roadways are two-lane, two-way.
2. Branch route to Sharpsville Area Schools.
3. Alternative route
4. Branch route to Farrell High School

## Programmed Improvements

Funding is in place to install curbing, install a sidewalk, and improve the drainage on the northwest side of Mercer Avenue starting from the south at Chestnut Street. Since the project is still in the planning stages, and is not fully funded, the northern terminal has not yet been determined. The northern limit of the project could be as far as Shenango Avenue. Construction may begin in Spring 2002.

District 1 currently has a project currently in final design to widen the Shenango Freeway/U.S. 62 between Smith and Stambaugh Avenues. If this corridor is developed as a regional bicycle/pedestrian route, the safety in crossing the Shenango Freeway would have to be addressed.



**Figure 34. Segment of Mercer Avenue to have curb and sidewalk installed (southwestward view).**

## Challenges

Some of the challenges to reach the objective of a connected north-south bicycle/pedestrian corridor are:

- § Lack of sidewalks in much of the corridor
- § Lack of roadway width for parking and a bike lane on a majority of roadways within the corridor
- § Crossing U.S. 62/ Shenango Freeway
- § Development of a southern terminus
- § Numerous STOP signs in the corridor

While the number of challenges for the North-South Corridor is not as numerous as those for the East-West Corridor, they are more significant from a cost and impact standpoint. The East-West Corridor essentially has the infrastructure to develop a connected bicycle/pedestrian corridor. However, the North-South Corridor may require significant right-of-way (note that right-of-way width was not investigated as part of this study) and significant widening. While any vision is feasible with proper funding and support, the North-South Corridor will require more preliminary planning and engineering in order to determine the funding and level of support needed. This fact is reflected in the action plan outlined below.

## Recommendations/Action Plan and Associated Costs

### Action #1. Perform a feasibility study to determine a location for a southern terminus.

As stated in the challenges, a southern terminus has not been identified. Therefore, there is no means to change modes of transportation. A study should be administered or performed to identify a location to develop a terminal.

The estimated cost to perform this study is \$10,000.

### Action #2. Construct sidewalks on at least one side of roadways with no sidewalks.

The following roadways in the Corridor have no sidewalks:

- \$ High Street
- \$ Walnut Street
- \$ Koehler Drive
- \$ Hazen Road
- \$ Service Road
- \$ Union Street
- \$ Shenango Avenue.

The sidewalks should be concrete and 5-foot wide with curb cuts meeting ADA requirements at all intersections. Ideally the sidewalks should be set back from the curb by a minimum 2-foot grass buffer strip. Further investigation into constraints such as right-of-way and utilities is necessary.

The estimated construction cost (not including right-of-way, grading, or utility relocation) is \$435,000 for this improvement.

### Action #3. Develop a corridor sidewalk maintenance and improvement program.

The ultimate goal of a corridor sidewalk maintenance and improvement program is to have 5-foot wide sidewalks on both sides of the corridor that are in good condition. To accomplish this goal, the following improvements must be made:

- Construct sidewalks on the side of each roadway where they are absent:
  - High Street
  - Walnut Street
  - Koehler Drive
  - 4<sup>th</sup> Street

- Forker Boulevard
- Hazen Road
- Spencer Avenue
- Service Avenue
- Union Street
- Shenango Avenue
- Mercer Avenue.

The estimated construction cost for these improvements (not including right-of-way, grading, or utility relocation) are \$950,000.

§ Widen narrow sidewalks such as along Quarry Way. The estimated construction cost for this improvement is \$15,000.

#### **Action #4. Inventory and improve pedestrian accommodations at intersections through the corridor.**

The study team did not inventory pedestrian accommodations at all intersections within the study corridor. However, conditions that should be improved include:

- § Removal of "NO PEDESTRIAN CROSSING" signs. The estimated unit cost to remove the signs is \$200.
- § Installation of curb cuts. The estimated unit construction cost is \$2,500.
- § Installation of pedestrian push buttons and signal heads at signalized intersections. The estimated construction cost per intersection for push buttons and wiring is \$2,100, and the estimated construction cost per intersection for pedestrian signal heads and wiring is \$5,700.

A study to inventory existing conditions and recommend improvements is the first step to accomplishing this action item. The estimated cost for the study is \$15,000.

#### **Action #5. Perform a corridor-wide parking study.**

The width on most of the roadways in the corridor is not adequate to accommodate a bike lane when parking is present. If parking could be restricted, bike lanes may be designed within the existing pavement width of many of the corridor roadways. We recommend a corridor-wide parking study in order to determine where parking may be restricted without impacting usage or residents along the corridor. The estimated cost to perform a corridor-wide parking study is \$60,000.

**Action #6. Perform an engineering assessment to widen to accommodate a bike lane.**

After performing and implementing recommendations of the parking study, an engineering assessment should be performed to accommodate a bike lane through the corridor. As mentioned in the Challenges subheading, significant funding and right-of-way may be required to accommodate a bicycle lane. This effort should be performed to determine the necessary funding and right-of-way. The effort would summarize in detail:

- Existing conditions of the corridor:
  - Roadway widths
  - Right-of-way widths
  - Approximate property lines and property owners
  - Roadside topography
  - Proximity of structures to the roadway
  - Utilities
- Identify specific improvements and their associated impacts:
  - Amount of widening necessary on each roadway segment
  - Number of properties impacted by the widening
  - List of property owners impacted
  - List of utilities
  - Approximate necessary grading
- Summary of recommended improvements:
  - Costs
  - Priorities (or action plan).

Since the roadway infrastructure is not available to accommodate bicyclists at this time, we do not recommend the installation of signs or pavement markings. This recommendation is estimated to cost \$20,000.

**Action #7. Install additional lighting in some areas of the corridor.**

The study recommends the installation of additional roadway lighting be considered along:

- § High Street
- § Walnut Street
- § 7<sup>th</sup> Street
- § Hazen Road
- § Park Avenue (Lower)
- § Shenango Avenue
- § Mercer Avenue.

The estimated construction cost associated with this improvement is \$985,000.

Figure 35.

## West Middlesex/Sharon Shenango River Rail Trail

### Background/Introduction

The development of a rail to trail corridor along the Shenango River complements the region's plans for identifying and improving a roadway-based bicycle/pedestrian network. As already noted, the identification and development of these bicycle/pedestrian corridors should not be done in isolation, but coordinated with the development of other linkages in the region's network. The network then should be developed with concern towards accommodating point-to-point travel, as well as inter-municipal bicycle and pedestrian trips. The development of a rail trail along the Shenango River would accomplish this by providing off road connections between the downtown areas of Sharon, Wheatland and West Middlesex, as well as with the other two roadway-based corridors in this Action Plan.

The concept of developing an off-road trail is also consistent with the MPO's draft Bicycle/Pedestrian Plan. As already noted, one of the plan's top priority goals is to identify a bicycle and pedestrian network. More specifically, one of the plan's top three objectives states that the MPO should: "Preserve and/or acquire abandoned railroad lines, bridges, stations and rights of way" as part of developing a regional bicycle/pedestrian network. The plan additionally documents the region's bicycle/pedestrian committee recommendation that the region explore the development of an off-road trail along the Shenango River south to New Castle. This link would ultimately provide Shenango Valley residents and visitors with a rail trail from Sharon 20 miles south to downtown New Castle. From the Lawrence County seat, the route could utilize existing streets to a connection with the Savich Trail along the Mahoning River into Lowellville, Ohio.

### Existing Conditions

The proposed trail is the former right-of-way of the Penn Central Railroad and has been abandoned since 1982. The study corridor parallels the Shenango River for approximately 10½ miles between the Shenango Dam and Reservoir and the Borough of West Middlesex. The corridor surface is typically eight feet wide and is well compacted. It is abandoned between the boroughs of West Middlesex and Wheatland but has active Norfolk Southern rail lines northward to the City of Sharon and beyond.

### Recommendations/Action Plan & Associated Costs

There are many things to consider when advancing into the planning stages of rail trail development. Chief among these is the administration of a feasibility study to examine the public and political support for such an initiative. Key considerations for the Commission to examine when moving the potential project to construction include:

- **Conducting a Feasibility Study.** Ultimately, before any public funds are obligated for developing a rail trail, the MPO and/or municipalities of the region should jointly administer a feasibility study. A feasibility study would address major issues relative to the conversion of an abandoned rail right of way to trail use. The extent of such a study would vary depending on the known level of public support, as well as the number of environmental hazards and

engineering/structural issues such as the bridge over the Shenango River in Hermitage. A feasibility study would also answer questions related to:

- **Legal Issues.** Does the possibility of a free and clear title to the right of way exist? Property owners adjacent to the proposed trail should be contacted not only in order to gauge their interest, but also to develop a preferred arrangement for easements or property acquisition. Potential exists for adjacent property owners to claim that sections of the right-of-way have since reverted to their ownership upon abandonment by the railroad. In some instances, the corridor may need to utilize existing roadway-based facilities where mitigating trail right-of-way encroachment would be cost prohibitive. Involvement of a local civic-minded attorney on a pro bono basis or the solicitor for the community is typically all that may be necessary for this review unless the property issues are particularly complex.
- **Trail Alignment.** Detailed mapping of the corridor should be performed, with information from MCRPC, USGS and Norfolk Southern. Mapping will be used in part to develop a physiographic analysis of the corridor, documenting areas of steep slopes, topography, composition of the rail bed, drainage problems, and ROW dimensions. Alignments should also consider any potential barriers to trail development, such as industrial encroachment, utilities, highway and rail crossings and existing bridges or culverts in poor condition where efforts to bring them up to acceptable safety standards would be cost prohibitive. In the case of bridges, the Pennsylvania Public Utility Commission (PUC) would be expected to render any final decisions regarding safety concerns, while the Pennsylvania Historic Museum Commission (PHMC) would determine structures eligible for listing on the National Register of Historic Places.
- **Latent Demand.** A level of latent demand exists for any bicycle or pedestrian facility. A “Latent Demand Score” refers to the potential use of a facility (as opposed to potential ridership) by examining its service area, community character (demographics, etc.) and adjacent land uses. As a gravity model, planners can use this tool to provide more objective input versus anecdotal evidence in supporting trail construction, if needed. A simple random survey of community residents and visitors may also provide sufficient information from which to draw larger conclusions about usage or a range of expected use.
- **Intended Use.** Rail trails can be developed in a multitude of ways to support a variety of user groups. The feasibility planning process should work with local stakeholders and future users of the trail to determine the preferred uses for the trail. This decision will guide the future design and construction aspects of the trail such as width, landscaping and pavement type. The following user groups should be considered through the feasibility study process:
  - Motorized users such as ATVs, motorcycles, and snowmobiles.
  - Equestrian or horseback riders.
  - Pedestrians.
  - Bicyclists, roller bladers, etc.
  - Passive users such as hikers, birdwatchers or nature enthusiasts.
- **Ownership/Management.** There must be an agency willing and appropriate to own and/or manage the trail. This also needs to be determined as part of a feasibility study. Local options could include a local trail association (Mercer County Rails to Trails) or bicycle group

(Two-Tired Bike Club), the Mercer County Commissioners or the Mercer County Regional Council of Governments.

Maintenance is a key consideration in the ownership and management of a trail. After a trail is constructed, it requires regular maintenance such as landscaping, trash pick-up, and surface repair. The non-profit groups listed above and local volunteer groups may be excellent resources for performing trail maintenance at minimal or no cost. Adopt a trail programs provide an innovative approach to tapping the community spirit of groups to carry out some routine trail maintenance. Indirectly, this too helps to build a sense of community ownership and personal pride for the trail.

“[T]he rail with trail development process takes time, typically taking 3 to 10 years to take the trail from concept to construction.” – *FHWA Rails-with-Trails: Best Practices Report*

- **Providing Access to Popular Community Destinations.** While rail corridors can sometimes traverse isolated and rural areas, they can also provide bicyclists and pedestrians with a direct connection to popular community locations; including:
  - West Middlesex Borough,
  - Shenango Reservoir,
  - Sharon Park,
  - Major employment areas of the Duferco Steel Co. and other such Keystone Opportunity Zone (KOZ) property employers in Farrell, and
  - Downtown Sharon.

Downtown Sharon in particular offers bicyclists and pedestrians many commercial, educational and institutional attractions, as well as intermodal connections with the Shenango Valley Shuttle Service (SVSS).

The quality of bicycle/pedestrian facilities (bicycle parking, lighting, information kiosks, etc.) at major origins and destinations is also a key consideration for trail planners and engineers. In the case of West Middlesex Borough for example, planners should ensure that a logical connection could be made from a developed trailhead west of the Shenango River to the existing sidewalk on the PA 318 bridge to the borough’s downtown. A parking lot, complementing the existing boat ramp and future trail development south to New Castle should also be explored to encourage trail use for both recreational and commuting needs. The Commission should also investigate similar initiatives for better connections from future trail/trailheads to such facilities as PSU Shenango, downtown Sharon, and major recreational and employment areas in Farrell, Wheatland and Sharon. Identifying popular or needed trail connections like this can also be a



**The proposed rail trail would utilize existing roadway-based and pedestrian facilities through downtown Sharon.**

positive opportunity for community input and involvement in the planning process. Using maps in an open house setting provides a solid collaborative venue for identifying some of these desired connections and the associated amenities. In doing so there should always be a strategic eye on the opportunity for public-private partnerships as well as private sector only projects—commercial and donations.

“[N]onmotorized modes are...a critical element of the local, regional and national transportation system.” – *Kenneth Wykle, former FHWA Administrator*

- **Rail With Trail Issues.** A major consideration of the trail north of Wheatland Borough is the presence of shared right-of-way with an active Norfolk Southern (nee Erie, then Conrail) rail line. The line is locally known as the Wheatland Industrial Track and runs approximately 7 miles from Wheatland Borough north to Sharpsville Borough. This line is typically served three times a week to major area industries such as Bi-State Storage, Duferco Steel Co., and SQP Inc. It is an important link for these and other shippers avoiding bottlenecks in the Buffalo, NY region and providing freight rail service for major employers in the Sharon and Greenville areas.

With any planning for the trail, the Commission should take care in securing Norfolk Southern’s management as early as possible to give them a stake in the planning process. With contrasting viewpoints, advocates of rail with trail and railroad operators naturally can view each other’s goals with a great deal of cynicism. Common ground however, is possible, as there are presently approximately 60 such rail with trail facilities in the United States (up from just 37 in 1996). Trail planners and engineers should work closely with the rail operator as partners from the start to ensure that its interests are addressed. The development of Keystone Opportunity Zones (KOZs) in the area, as well as ongoing east west rail capacity issues may serve to see increased freight traffic on this line, which might discourage any discussion of a future shared use right-of-way.

- **Development of Related Trail Facilities.** Various facilities that could be developed as funds become available after the trail is initially developed could include:
  - Parking for existing areas, such as at West Middlesex and Wheatland and at other areas that could be developed (Clark Street in Sharon and Hermitage) as trail use increases and reaches equilibrium
  - Rest rooms with low maintenance, self-composting toilets
  - Trash cans
  - Camping in commercial areas could be privately developed



**The development of trailhead facilities and connections to the downtown and neighborhoods of West Middlesex and PA 318 should be explored as part of a Shenango River Trail Feasibility Study.**

- Interpretive signs could be posted along the trail, documenting the region's industrial heritage
- Information Kiosks and emergency communication systems (if deemed necessary—e.g., Mayday phone boxes at trail heads with utilities).

### **Action #1. Pursue available funding from DCNR and/or PENNDOT to administer a feasibility study to develop a rail trail.**

Based on the preceding narrative, we recommend that MCRPC take a lead role in administering or conducting a feasibility study for the corridor to determine the appropriateness of spending public money for converting a rail trail corridor into an active bicycle and pedestrian facility. It should be stressed that the feasibility study does not necessarily have to be a major effort or even a contracted project. If there is a group of dedicated citizens who will work with staff, this type of analysis can be conducted in-house. If that commitment and time resource is not available and/or the technical skills are not available then a modes consultant effort would be cost-effective.

Developing a rail trail along this corridor is consistent not only with local plans, but state initiatives, as well. One of the recommendations of the Pennsylvania Greenways Partnership Commission's (co-chaired by DCNR and PENNDOT) Greenways Plan (*Pennsylvania Greenways: An Action Plan for Creating Connections*) advocates that every county in Pennsylvania have a greenways demonstration project selected and underway by 2007. An additional strategy as part of implementing the statewide plan includes the construction or enhancement of 100 miles of bicycle and pedestrian facilities annually. Adopted in June 2001, Pennsylvania's first ever statewide greenways plan, entitled "Pennsylvania Greenways: An Action Plan for Creating Connections" advocates an aggressive 12 point implementation plan for planning and constructing greenways in the Commonwealth. Two of the 12 strategies, "Establishing a Statewide Network of Greenways," and "Providing Alternative Transportation" are objectives that are directly related to the implementation of this recommendation.

- **Establishing a Statewide Network of Greenways** – this project could serve as a "spoke" to some of the region's activity centers, or hubs (downtown Sharon, Wheatland and Shenango Dam).
- **Providing Alternative Transportation** – the project would provide a transportation alternative to the private automobile and serve as an important part of Mercer County's overall transportation and recreational system.

DCNR and PENNDOT, as co-chairs of the Greenways Partnership Commission are committed to the plan's implementation. Therefore, DCNR's Community Conservation Partnership Program and PENNDOT's Transportation Enhancement Program are two important sources of funding for organizations such as MCRPC to pursue in funding initiatives such as these. Funding from both of these programs could be used as leverage or used as part of a local match. For example, DCNR will match PENNDOT's TE program funds, just as PENNDOT will match funding coming from DCNR's funding programs. Non-cash ("soft") matches are also allowable for services rendered such as volunteer labor or other, professional work.

DCNR's Bureau of Recreation and Conservation provides funding for feasibility studies as one of the planning project types eligible under its technical assistance funding programs. The

Bureau has approximately \$1 million available statewide for rail trail projects in its Pennsylvania Recreational Trails Program, not including the \$8 million it has available under its Keystone Growing Greener grant program. These funds do not include the \$1.3 million DCNR had regionally (based on last year's figures) to use over 14 counties. Applications this year are due to DCNR by Wednesday, October 31, 2001 with announcements expected in March 2002. (DCNR will host a regional informational workshop at the Clarion Holiday Inn this September 12. Applications are available online at [www.dcnr.state.pa.us/grants.htm](http://www.dcnr.state.pa.us/grants.htm).)

PENNDOT's popular Transportation Enhancement Program has been funding "non-traditional transportation projects" since the enactment of TEA-21 in June 1998. The "Preservation of Abandoned Railway Corridors (Including the Conversion and Use, Thereof for Pedestrian or Bicycle Trails)" is just one of the 12 eligible categories allowable by PENNDOT to be funded through this program. Applications under this program are due October 26, 2001. A Program Guide and application are available online at [www.dot.state.pa.us](http://www.dot.state.pa.us).

## Benefits

Some potential benefits in developing a rail trail facility include:

- **Tourism.** Enhances the reputation of the Shenango Valley as a place to visit. It does so by building on an existing asset of the community's, rather than creating a brand new asset. Bicycle and pedestrian conditions directly and indirectly impact tourism. Areas that are accommodating to cyclists and pedestrians generally translate into tourist-friendly areas. Promoting the development of the trail as a tourism/economic development project may be necessary to garner public and political support for its development. The existence of trails correlates with the overall perception of an area's quality of life.
- **Public Awareness of NS.** The relationship of the trail with the rail line has great potential to raise the community's awareness of Norfolk Southern, its operations and its importance to the local economy. The value of any donated land within the right-of-way can also be used as a tax deduction.
- **Health.** Offers additional opportunities to improve residents' fitness, health and overall sense of well-being.
- **Alternative Transportation Options.** While the trail may be classified by most as a recreational facility, it also offers the potential to serve the transportation needs of bicyclist and pedestrian commuters. It also provides an avenue for some who cannot drive (i.e. children and the elderly) to become independent travelers.
- **Right-of-Way Preservation.** The development of a rail trail would preserve an existing, currently unused right-of-way, improving transportation efficiency while preserving these rights-of-way, should they be needed for rail use again in the future. However, it is very difficult to re-establish a line once developed as a trail. The many impediments towards making the conversion (e.g., liability, safety and funding issues) make it too cost prohibitive. (There are not many successful re-conversions nationally.) Congress might change national policy on these issues though, if east-west rail freight capacity issues continue. It should be noted that the former Erie New Castle line parallels the former Pennsylvania Railroad line to the east nearly all the way to New Castle.

See sample trail cross-section figure on next page.

## Conclusion

Municipalities interested in pursuing the development of corridors in addition to the three discussed here should consider the following criteria when planning for pedestrian facilities and bicycle routes:

- **Roadway Width.** Roadway design is a critical component in determining safe conditions for bicyclists and pedestrians. Widths of bicycle lanes vary, depending on the available cartway width, as well as the presence of on-street parking. Paved and striped shoulders often can serve as well as established bike lanes.
- **Speed Limits.** An important factor in all pedestrian crashes (virtually all pedestrian crashes are the result of a collision with a motor vehicle) is speed. A reduction of speed limits (and generally consistent posting of speeds) can reduce the frequency as well as the severity of pedestrian crashes.
- **On Street Parking.** The availability of on-street parking has obvious effects on safety for bicyclists, as parking turnover (and opening car doors) intrudes into the path of a bicyclist.
- **Intersection Geometry.** Median strips and reduced turning radii should be used to make intersections more pedestrian friendly. Good intersection geometry can slow vehicular traffic, thus making cross street movement safer for pedestrians by virtue of negotiating slower traffic speeds and having shorter distances in crossing the street.
- **Sidewalk Conditions.** Sidewalks should be a minimum of 5 feet in width in high pedestrian area locations, such as in downtowns, school campuses, etc. In residential areas with more than four units per acre, sidewalks should be present on both sides of the street. As an important aside, local planners and public officials should give serious consideration to sidewalks as part of most development plans and subdivision review. Ordinances should be updated to require sidewalks as appropriate. This is a very low cost in relation to its benefits.
- **Crosswalks.** Crosswalk markings are used in areas where there is a potential for conflict between a motorist and pedestrian. They are used to guide pedestrians in proper paths at signalized intersections and intersection approaches where traffic stops. The municipality is generally responsible for applying these markings to the roadway.
- **Connectivity.** Improvements that complete important “missing links” between existing bicycle routes should be considered as higher priority than improvements which extend routes or which upgrade facilities on existing routes. Connectivity and continuity are important factors in establishing convenience for pedestrians and bicyclists. City public works departments should routinely (e.g., annual work program planning) consider making some improvements that improve the overall bike-ped network in an area.
- **Illumination.** There should be clear visibility of pedestrians approaching intersection crosswalks. All intersections especially should be well lit to make pedestrians visible to approaching motorists.

### Southern Segment: West Middlesex to Wheatland Borough



### Central Segment: Wheatland to Downtown Sharon



